

Table 3.3		
Hatfield Model, Release 3.0		
Default Copper Feeder Fill Factors		
vs.		
Calculated "Actual" Copper Feeder Fill Levels		
Texas - All ICOs		
Density Zone	Default Feeder	Actual Feeder
0-5	.65	.33
5-100	.75	.54
100-200	.80	.63
200-650	.80	.65
650-850	.80	.67
850-2,550	.80	.68
2,550-5,000	.80	.71
5,000-10,000	.80	.72
10,000+	.80	.76
Sources: Hatfield Model Release 3.0 Inputs and Assumptions, Appendix B, p. 3; results of ETI run for TX (all ICOs).		

<p>Table 3.4</p> <p>Hatfield Model, Release 3.0</p> <p>Default Distribution Fill Factors</p> <p>vs.</p> <p>Calculated "Actual" Distribution Fill Levels</p> <p>Texas - All ICOs</p>			
Density Zone	Default Distribution	Actual Distribution (DLC)	Actual Distribution (non-DLC)
0-5	.50	.32	.13
5-100	.55	.39	.27
100-200	.55	.39	.35
200-650	.60	.43	.39
650-850	.65	.44	.44
850-2,550	.70	.49	.49
2,550-5,000	.75	.54	.53
5,000-10,000	.75	.53	.54
10,000+	.75	.51	.54
<p>Sources: Hatfield Model Release 3.0 Inputs and Assumptions, Appendix B, p. 2; results of ETI run for TX (all ICOs).</p>			

As is explained above, it is critical to avoid a mismatch between the demand for which capacity is being deployed and the demand being used to compute unit costs. If fill factors are set to accommodate excessive growth in a model being used to price services for today's customers (or to recover USF support from today's customers), there will be a mismatch of cost causation and cost recovery. If a model uses fill factors based upon estimates of future demand (e.g., growth in second lines), then the FCC should consider, at a minimum, using the estimated revenues flowing from that substantial growth in second

lines⁶⁶ in the computation of the proposed revenue-per-line threshold, and furthermore should include that forecasted demand in sizing cable and computing unit costs.

US West has emphasized that the choice of fill factors for a cost proxy model is not only impacted by demand growth considerations, but also must be evaluated in the context of other operating costs, including the costs of facilities reinforcement and rearrangement that may increase when plant utilization rates are raised.⁶⁷ However, US West is incorrect to conclude that a proxy cost model must assume actual average fill factors because use of any higher values would necessarily result in those types of offsetting cost increases, which are not reflected in the models. *Id.* at 23. In reality, ILECs loop planning guidelines routinely distinguish between *actual* plant utilization rates and *target* plant utilization rates, the latter being the rates which the ILECs themselves consider to represent optimal, least-cost provisioning practices (for the full range of services provided over their plant, which may be wider in scope than universal service *per se*). In many cases, ILECs' actual average plant utilization rates are substantially lower than their own target values, so that, at a minimum, the fill factors used for modeling purposes can be adjusted upward to the target values without the need to make any compensatory cost adjustments.

Staff raises the possibility that fill factors may differ between residential and business markets.⁶⁸ This indeed is likely but not in the way delineated by Staff.⁶⁹ Staff points to the ILECs' practice of deploying additional wire pairs per household in order to provide

66. See, e.g., "Baby Bells Rely on Specialty Services for Solid Earnings," *New York Times*, January 22, 1997; "Four Baby Bells Report Healthy Results," *Wall Street Journal*, October 18, 1996; Merrill Lynch, "United States Telecom Services — RBOCs and GTE Third Quarter Review," November 13, 1996, at 3 (which includes, among other statistics, the fact that BellSouth experienced additional residential line growth rates of 23% year-over-year in the third quarter of 1996, generating \$100-million in revenues for the company in that quarter alone); and finally a March 19, 1996 speech by Raymond F. Smith (CEO of Bell Atlantic) at a Merrill Lynch Telecommunications CEO Conference, in which he stated:

In 1995, sales of secondary lines at Bell Atlantic increased more than 50 percent, fueled by surging demand for Internet and telecommuting applications.

Unlike traditional horizontal line growth, which would have significantly added to our capital expenditures, the vertical growth we experienced in '95 brought most of the revenues down to the bottom line. *That's because we were able to provision new lines and services from idle capacity in an [sic] existing plant.* (emphasis added)

67. US West Comments at 22-23.

68. Staff Paper at ¶ 42.

69. Staff implies that Centrex causes the fill factor to be relatively higher when the opposite is the case. It has been ILECs' Centrex business plans that have been the cause of excess capacity in outside plant — excess capacity that enables an ILEC to readily offer Centrex in competition with PBX-based service. *An Analysis of Outside Plant Provisioning and Utilization Practices of U S West Communications in the State of Washington*, Selwyn, Lee L., Patricia D. Kravtin, and Paul S. Keller, Economics and Technology, Inc., March 1990.

additional lines as the cause of low residential fill factors, and observes that depending on the relative use of Centrex and PBX lines, business fill factors may be either lower or higher than residential fill factors. It is critical to distinguish the cost causation reflected in the fill factors for these markets, and to disaggregate further within the two categories (residence and business) that Staff identifies. As was recognized by the FCC in its Access Charge Reform NPRM, *additional* residential lines should be viewed separately from *initial* lines.⁷⁰ The low residential fill factor mentioned by Staff is directly attributable to meeting demand for *additional* lines. ILECs' interest in providing Centrex, on the other hand, is a major cause of a low outside plant fill factor because ILECs require excess capacity in order to be able to attract and retain Centrex customers.

Both the Hatfield Model 3 and the BCPM "deploy" a theoretical network that is sized to serve virtually all lines in a CBG, including primary and secondary residential access lines as well as business lines and special access lines. (In addition to these categories, the Hatfield Model also includes an estimate for public access lines per CBG). The fill factors in these two models reflect the fact that the network being modelled serves both the subsidized⁷¹ service (which is characterized by a relatively stable demand) *and* non-subsidized services (which are characterized by relatively more volatile demand, and thus a corresponding need for increased spare capacity, resulting in a correspondingly lower fill factor). Both models adopt a single "fill factor" that each applies to *all* services. As a result, the fill factor that is incorporated into these two models is lower than that which would be necessary to serve only the stable, high-penetration, subsidized services. Although, as Table 3.5 below shows, the default fill factors in the cost proxy models have been moving in the correct direction, none of the models include fill factors that are appropriate for single-line business and primary residence lines, although the TECM comes the closest.

70. Access Charge Reform NPRM, at ¶ 65.

71. "Subsidized" is being used here to mean eligible for universal service support, and specifically refers to primary residence and single-line business lines in high-cost areas.

Table 3.5							
Default Fill Factors for Feeder and Distribution Increase in Newer BCM Releases							
Comparison at Various Density Levels (Density measured in Lines per Square Mile)							
Feeder							
Density	BCM	BCM2	BCPM	HM2.2.1	HM2.2.2	HM3	TECM(1)
3	0.65	0.75	0.75	0.65	0.65	0.65	0.875
50	0.65	0.75	0.80	0.65	0.75	0.75	0.875
100	0.75	0.80	0.80	0.75	0.75	0.75	0.875
250	0.80	0.80	0.85	0.80	0.80	0.80	0.875
500	0.80	0.80	0.85	0.80	0.80	0.80	0.875
750+	0.80	0.85	0.85	0.80	0.80	0.80	0.875
Distribution							
	BCM	BCM2	BCPM (2)	HM2.2.1	HM2.2.2	HM3	TECM(1)
3	0.25	0.40	0.40	0.50	0.50	0.50	0.75
50	0.25	0.40	0.45	0.50	0.55	0.55	0.75
100	0.35	0.45	0.55	0.55	0.55	0.55	0.75
250	0.45	0.55	0.65	0.60	0.60	0.60	0.75
500	0.45	0.55	0.65	0.60	0.60	0.60	0.75
750	0.55	0.65	0.75	0.65	0.65	0.65	0.75
1000	0.65	0.75	0.75	0.70	0.70	0.70	0.75
2500	0.65	0.75	0.80	0.70	0.70	0.70	0.75
3000+	0.75	0.80	0.80	0.75	0.75	0.75	0.75
<p>Notes: (1) TECM also lists a combined Feeder/Distribution utilization factor with a default value of 85%.</p> <p>(2) The BCPM Distribution Fill Factor reaches 75% at 501 lines/square mile.</p> <p>Sources: ETI's April, August and October 1996 Reports and documentation accompanying BCPM, HM3 and TECM filings with the FCC.</p>							

In developing the appropriate parameters (or “inputs”) into a cost proxy model, the FCC should consider separately general categories of service that reflect the differential costs they impose. Four such categories would be: primary residence and single-line business; additional residence; multiline business; and Centrex. Such categorization — should it be adopted by the FCC — should only occur, however, if it is applied consistently in all three contexts: USF; UNE; and access charges. For example, relatively higher fill factors (and longer lives) should be assumed for primary residence line first category than for the competitive Centrex category. Thus, the selection of the appropriate parameters would differ among these variations on customer classes but would be consistent across models. Such an approach is consistent with the FCC’s TELRIC guidance. The FCC stated that “per-unit costs shall be derived from total costs using reasonably accurate ‘fill factors’ (estimates of the proportion of a facility that will be ‘filled’ with network usage” and also referred to a “reconstructed local network [that] will employ the most efficient technology for reasonably foreseeable capacity requirements.”⁷² The *Local Competition Order* also requires that “[p]er unit costs shall be derived from total costs using reasonably accurate ‘fill factors’ (estimates of the proportion of a facility that will be ‘filled’ with network usage); that is, the per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a reasonable projection of the actual total usage of the element.”⁷³

3.4 The use of the existing wire center topology as the foundation for a theoretical network is a reasonable simplifying assumption, but does result in an overstatement of forward-looking costs

The parties generally agree that the use of existing wire center locations⁷⁴ is a reasonable simplifying assumption to employ in a cost proxy model.⁷⁵ While we concur in this assessment, the FCC should realize that this simplifying assumption biases the cost estimates upward relative to a full “scorched earth” modeling approach. Many ILECs have begun, but not necessarily completed, the multi-year process of consolidating wire centers and deploying host-to-remote switching configurations, which can produce significant cost savings relative to traditional stand-alone switching architectures.⁷⁶ The consolidation of

72. *First Interconnection Order*, at ¶¶ 682 and 685.

73. *Id.*, at ¶ 682.

74. See Staff Paper at ¶¶ 18-21.

75. See USTA Comments at 19; Pacific Bell Comments at 10; MCI/AT&T Comments at 12-13; US West Comments at 18.

76. See the August 1996 Report at 43-45 for more discussion of ILECs’ increasing use of remote switching units.

switches will lower the cost of basic local exchange service, and because this trend is not reflected in any of the models, the Commission should recognize that the models overstate costs.

3.5 The switching components of the cost proxy models are continuing to evolve

The Hatfield 3 incorporates increased granularity for the level of user specification for the switch-related inputs than did its predecessor. Hatfield 3 has developed two separate switching curves — one for Tier 1 ILECs and a second for small ICOs. This revision presumably reflects the fact that small ICOs typically obtain lower equipment discounts than large ILECs, and may also reflect the fact that small ICOs confront relatively larger fixed costs than large companies.

The BCPM, instead of relying as its predecessor did on a table mapping switch size to cost, now relies on the results of a survey conducted by INDETEC on behalf of the model sponsors. The results of the survey — which are based upon responses provided by various ILECs — were translated into a single curve. In order for the FCC to properly evaluate the proposed development of the switch costs in BCPM, the Commission should require the sponsors to provide the FCC with the complete results of the surveys, even if that should occur through a protective agreement. Furthermore, some of the companies surveyed did not respond or did not respond on time for the data to be incorporated in the new revised model and some data was excluded from the model because of inconsistencies. The FCC should be able to independently evaluate the significance of the failure of certain companies to respond to the survey and to confirm the validity of the sponsors' exclusion of the allegedly unreliable data. In addition, because vendors (Nortel or Lucent) did not respond to the survey with respect to appropriate discounts, BCPM continues to use SCIS (Bellcore's switching cost model) data for the purpose of computing discounts.

The BCPM switching module is also troublesome because it is based upon a curve that fits its underlying data poorly.⁷⁷ The graph provided by the sponsors shows "actual" switch costs (i.e., corresponding with the survey responses) for individual switches as scatter points with the predicted switch curve. Approximately two-thirds of the "actuals" do not fall on the predicted line and furthermore are below the line. For switches above 15,000 lines in size, virtually all the "actual" data points are below the predicted line. Therefore, the use of the line that purportedly fits the data results in an overstatement of switching costs.

By contrast, the TECM uses a simplified approach to modelling switching costs which includes variables for associated building costs, traffic-sensitive and non-traffic-sensitive

77. The BCPM documentation graphs the "Best of Breed" Switch Curve and claims a resulting switch cost per line of: (\$225 per line) plus (\$261,871 divided by total lines). See Attachment 4.

Network Design

inputs, as well as a single variable to capture additional switching features (e.g., custom calling, caller ID).

In order to determine valid switching cost data, it is critical to examine further the methodology proposed by the model sponsors and also to obtain allegedly proprietary data from the industry.

4 | COMPUTING USE REQUIREMENTS

4.1 The assessment of USF need should be conducted at the wire center level

The Joint Board has indicated that it would be useful for cost proxy models being used in the universal service proceeding to have the capability to assess USF requirements at the wire center level.⁷⁸ However, despite representations that suggested that the most recent models would reflect this important improvement, it appears that neither the BCPM nor the Hatfield Model have responded to the Joint Board's stated interest in a cost proxy model which is able to roll-up costs determined at the CBG level to the wire center level for the purposes of determining eligibility for high cost support. By contrast, the TECM necessarily assesses the need for USF at the wire center level because its theoretical network is deployed at this level. This simple but important attribute is critical in any cost proxy model that is being used for USF purposes so that regulators can more appropriately evaluate the need for and size of universal service support.⁷⁹ This modification is clearly within the technical capabilities of the models' sponsors and the FCC should require that it be implemented.

Meanwhile, it appears that the BCPM's sponsors are, if anything, pushing for a further granularization of the determination of support requirements. The possible movement in the other direction — toward grids — is entirely inappropriate. Carried to its logical extreme, this philosophy would have us examine the cost of serving each and every household separately and any individual household that was above the threshold would be eligible for support. This simply ignores the reality of the economies of scale and scope associated with serving multiple households. For every house that is above cost to serve, there is another house that is below cost to serve, yet no one is suggesting that a carrier identify its below-cost grids and balance the "negative" USF requirement associated with these low-cost

78. The Joint Board expressed this concern in Appendix F, paragraph 29 of its Recommended Decision and in Question #58 of the request for comments, released July 3, 1996.

79. See Staff Paper at ¶¶ 22-24.

grids against the high-cost grids. The need for USF support should be evaluated at the wire center rather than at the excessively granular level of a census block group.

ILECs have raised the spurious concern that wire center averaging for the purposes of computing USF requirements will lead to creamskimming — they suggest that new entrants will target the relatively lower cost CBGs, leaving the incumbents to serve the high-cost CBGs. Incumbent LECs have raised this creamskimming concern in different contexts for many years, and their concerns have yet to be borne out. It is simply unlikely that a new entrant will invest substantial fixed costs to serve the only approximate 400 households in a single CBG, and then faced with the incremental cost of serving a neighboring CBG, will stop deploying additional plant. Furthermore, the evaluation of this significant aspect of a model's design should be considered in the context of the flow of universal service funds. ILECs — which enjoy enormous economies of scale and scope (which extend well beyond the CBG boundary) — will receive the vast majority of any new high cost fund that is established. For these reasons, the Commission should reject proposals to assess universal service requirements at levels below the wire center.

Because the FCC has raised the overarching issue of whether a single model can be used for multiple regulatory purposes, it is appropriate to consider the appropriate relationship, if any, of the geographic unit selected for assessing USF support and the geographic unit selected for deaveraging rates for unbundled elements and access charges. The Staff's conclusion that for setting prices for access charges and unbundled network elements, "cost differences within each zone should be insignificant, compared to the differences across zones" is a reasonable criterion.⁸⁰ This is an area that merits further deliberation.

4.2 The FCC should critically examine the recommendation to extend the universal service subsidy to single-line businesses

The Joint Board recommends that the high-cost program subsidize not only primary residence lines but also single-line businesses, a decision which will further increase the size of the USF. The FCC is not bound to accept this recommendation and there are sound public policy reasons why it should consider not accepting it. No one has demonstrated that affordability of basic telephone service to single-line business customers in high-cost areas is jeopardized without an explicit subsidy, and such a subsidy is not part of the Congressional USF mandate. Certainly, the fact that the models may have been revised to permit them to compute support this additional group should not influence the determination of *whether* it is good policy to subsidize this group of customers.

80. Staff Paper at ¶ 24.

4.3 "Historic" costs should not be reflected in a cost proxy model

As was stated in the NCTA's comments filed January 7, 1997 with the FCC,⁸¹ embedded cost information is not an appropriate measure of the reliability or "accuracy" of a cost proxy model. Nonetheless the ILECs continue to raise the issue of capital recovery.⁸² If access charges are reduced, the USF will have to be increased, their argument goes.

Necessarily the cost proxy models do not reflect or compute these historic costs,⁸³ and thus the FCC needs a distinct analytic framework for considering the merits, if any, of a mechanism for recovering whatever portion of these historic costs federal or state regulators deem appropriate.⁸⁴ What is clear, is that whatever limited amount (if any) is designated as being "recoverable" that amount should not be recovered in three proceedings — in access charges, unbundled elements, and universal service surcharges, nor should it be recovered in two jurisdictions — in the interstate and in the intrastate arenas.

The ILECs should not be permitted "to have it both ways." As was described in the *ex parte* filing by the Ad Hoc Telecommunications Users Committee,⁸⁵ ILECs should be presented with two mutually exclusive options:

1. ILECs could recover certain embedded costs through a regulatory mechanism, but then the ILECs' earnings will be limited to a prescribed rate of return; or
2. ILECs could recover costs to the extent they are able through market-based prices and their earnings would not be capped.

The purpose of allowing ILECs to select one of these two choices is to ensure that ILECs are not picking and choosing among incompatible regulatory treatments - either

81. NCTA Comments, January 7, 1997, CC Docket 96-45, response to question 2.

82. See, e.g. Pacific Bell's Comments at 9-10 and USTA Comments at 9-11 (taking positions that cost proxy models should reflect ILEC's embedded costs, rather than forward-looking economic costs).

83. Staff's conclusion that "models should not include sunk or historically incurred costs" is consistent with the overall purpose of cost proxy models - which is to provide a forward-looking economic cost as a basis for pricing. See Staff Paper at ¶ 9.

84. In its Access Charge Reform NPRM, the FCC states that "[t]o the extent that implementation of access charge reform is expected to cause a significant reduction in incumbent LEC access revenues from current levels, we seek comment on whether such LECs are entitled or should be permitted to recover some or all of that difference through a temporary special recovery mechanism." *Access Charge Reform NPRM* at ¶ 18. See also *Access Charge Reform NPRM* at ¶¶ 247 through 270.

85. Access Reform Presentation, Ad Hoc Telecommunications Users Committee, October 31, 1996; see also *Access Charge Reform NPRM*, at ¶ 265.

Computing Use Requirements

ILECs are not yet ready to face competition and thus seek the protection of traditional rate of return regulation (and thus should seek the first option described above) or ILECs are ready to face competition and thus do not need a regulatory mechanism for recovering historical costs (and should select the second option described above).

5 | CONCLUSION

Summary

The purpose of this paper has been to respond to some of the major issues and questions raised by the FCC and by Staff regarding the use of computer models in computing forward-looking economic costs. In principle, it is desirable for the FCC to adopt a single model that can be applied for the purposes of computing universal service support, access charges, and TELRIC prices. However, there is not yet a model that appears sufficiently robust to disaggregate the retail local exchange service into the piece parts. The FCC should definitely take affirmative steps to establish the appropriate data to reflect in the numerous user-specified values that are throughout the various contending cost proxy models, and, in so doing, should consider the relative competitiveness of the service being modelled so that appropriate, cost-based distinctions can be drawn between supplying demand for disparate purposes, e.g., primary residence and single-line businesses line versus competitive lines.

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Staff Analysis of)
Forward-Looking Economic Cost Proxy Models)

CPD 97-2

REPLY COMMENTS
of the
RURAL TELEPHONE COALITION

The Rural Telephone Coalition ("RTC") submits the following Reply Comments in response to the comments filed on February 18, 1997, on a Commission staff paper regarding the use of economic cost models for various purposes.¹ The RTC is comprised of the National Rural Telecom Association ("NRTA"), the National Telephone Cooperative Association ("NTCA"), and the Organization for the Promotion and Advancement of Small Telecommunications Companies ("OPASTCO"). These associations together represent more than 850 local exchange carriers (LECs) that provide service to rural communities throughout the United States.

In its comments, the RTC expressed its concern that several modeling issues remain unresolved. The Staff Analysis, as well as the testimony provided during the

¹ See, *The Use of Computer Models for Estimating Forward-Looking Economic Costs: A Staff Analysis* ("Staff Analysis"), January 9, 1997. Unless otherwise indicated, all citations herein are to comments filed in this proceeding on February 18, 1997.

January 14-15, 1997, proxy model workshops,² raised several issues which still need to be addressed before any model is adopted in the current, ongoing proceedings. The RTC agreed with the Commission staff that there remains a need for independent evidence that the models can accurately estimate the forward-looking cost of providing telecommunications service in rural areas and that further justification regarding the calculations of joint and common costs is required. The RTC also stressed the need for consistent and accurate input assumptions, pointing out that a model which represents the costs of an efficient forward-looking competitive network must also assume forward-looking cost of capital and depreciation expense inputs. The comments urged the Commission staff to consider proxy model workshop testimony regarding the need to incorporate a market share component. In addition, the RTC expressed its concern regarding the Staff Analysis criterion which suggested the models be judged by how they fulfill multiple regulatory objectives. Finally, the RTC urged the Commission staff to begin its validation efforts by testing at the facilities level.

A review of other comments filed on February 18, 1997, shows that each of these critical issues remains a source of serious concern. Commenters discuss problems at all levels, from the regulatory purpose(s) for which a proxy model may be used, to the specific input assumptions, to the validity of the currently available model results. The RTC recognizes that model sponsors have taken steps to modify their models in answer to industry criticism. However, the RTC is extremely concerned that a mandate to use any

² The workshops were conducted by the Federal-State Joint Board on universal service, on January 14-15, 1997. Robert Schoonmaker and Lisa Hanselman of GVNW-Management, Inc. testified on behalf of the RTC.

of the models, even the modified versions made available only recently, may have a detrimental impact on its member companies and the universal service which they provide to rural America.

Even if the Commission chooses not to adopt the Joint Board's recommendation to allow rural companies to elect the proxy approach during the initial three-year transition period, it is doubtful that a new model will be created before the recommended formal implementation for rural carriers begins. The RTC is concerned that the Commission will use this time period solely to adjust and test inputs of the large carrier proxies. Therefore we stress the need to consider the concerns of rural carriers at this stage.³ A more immediate concern of many small companies is the cream skimming problem which will be created if the study area average support level were to be made available to competitors with facilities only in the low cost areas. Even if they don't or are not allowed to choose a proxy to determine their support level, they must have use of a proxy or some other means to disaggregate support.

Furthermore, recently filed *ex parte* analyses of the most current versions of the models point out the need for additional concern regarding the inaccuracy of customer

³ The Joint Board's proposed freeze of existing universal service support levels based on 1995 amounts and freezing DEM weighting support levels and Long-Term Support levels based on 1996 amounts would provide inadequate support for companies involved in recent purchase transactions or other situations where they have substantially increased their per line investment. Thus, either the freeze must be eliminated or modified or the proxy models that are developed for implementation in 1998 must include analysis of small company operating areas and provide a means for small companies who desire and need to receive universal service support based on the adopted proxy cost model or other alternative. See Comments of the RTC and GVNW-Management, Inc. at 6-7, CC Docket No. 96-45, January 24, 1997.

location inputs and the resulting lack of uniformity nationwide in predicting costs.⁴

Therefore, the RTC reiterates its request that the Commission provide for some relief at the option of the carrier for underpredictions of actual costs in the event that it mandates that universal service support be based on a particular model. The only measure that can accommodate the wide variations among small, rural company conditions within a proxy approach would be a voluntary proxy for small and rural LECs.⁵ USTA points out the fundamental danger in attempting to mandate the use of a proxy in developing any type of pricing mechanism: "[t]he fact is almost every company has a unique serving area that will not be adequately captured by any proxy model." In this regard, the RTC agrees with the statement made by GTE, that "when the model disagrees with reality, the plan should accept reality."⁶ Southwestern Bell Telephone Company also urges the Commission to consider expanding the proceeding to consider actual cost analyses.⁷

⁴ See Ex Parte Comments of the Maine Public Utilities Commission, Joel Shifman and David Gabel, CC Docket No. 96-45, February 14, 1997. The RTC notes that most commenters in this proceeding were unable to conduct a thorough analysis of the latest versions of the models before filing on February 18, 1997.

⁵ See Further Comments of the RTC at 20-21, CC Docket 96-45, August 9, 1996. On February 24, 1997, Richard Clark of AT&T told the NARUC Subcommittee on Communications that the margin of error of any model will always be greater for rural telephone companies.

⁶ GTE comments at 30. The Commission should also note the overwhelming support of the commenting parties for the letter sent to Chairman Reed Hundt by Alfred E. Kahn, which states: "In unregulated markets, prices tend to be set on the basis of the actual costs of incumbent firms." See letter from Alfred E. Kahn to the Hon. Reed E. Hundt, at 2, January 14, 1997.

⁷ Southwestern Bell urges the Commission to "focus on the appropriate development and use of actual cost information in determining universal service support."

Various model sponsors aside, nearly all commenting parties reject the Commission staff's suggestion that the models should be applicable to multiple regulatory tasks, including the calculation of universal service support requirements, the pricing of unbundled network elements, and access.⁸ USTA points out that using the current models for a variety of regulatory purposes will compound the potential errors.⁹ Ameritech also urges the Commission not to seek the development of a single model for a multiplicity of tasks, but that in any case, the Commission must "re-validate" the chosen proxy before applying it for some new purpose.¹⁰ The RTC agrees and made this point in its comments.¹¹ This validation is currently lacking. Thus the RTC also supports Ameritech's assertion that "[n]o multipurpose model currently exists and there is no reason why the Commission should devote the limited time available before implementation of the universal service fund seeking to develop one."¹² Indeed, the RTC is most concerned that the proposed models have not yet been validated at the facilities level, and such efforts will obviously require more time than is available before the May 8 statutory date.

See Southwestern Bell comments at 5. *See also*, USTA comments at ii.

⁸ Staff Analysis at para. 11.

⁹ USTA comments at 12.

¹⁰ Ameritech comments at 15. *See also*, comments of the Public Utility Commission of Texas at 3, GTE comments at 21-22, and Bell Atlantic and Nynex comments at 7-8.

¹¹ *See* RTC comments at 6.

¹² Ameritech comments at 2.

Several commenters, in addition to the RTC, expressed their remaining concern over the current lack of validation. The fact that none of the models has actually been used to build a network is a key concern for Southwestern Bell.¹³ Nearly all commenters agreed that validation requires an actual engineering assessment.¹⁴ Even Hatfield model sponsors MCI and AT&T support this notion.

Of the methods proposed, the suggestion of comparing the results from a representative sample of CBGs with an engineering study of existing networks seems to hold the most promise.¹⁵

The RTC reiterates the importance of facilities level testing and urges the staff to begin validation efforts with actual engineering studies.

The RTC notes with concern that few commenting parties mention the problems inherent in a 100 percent market share assumption.¹⁶ Again, the RTC urges the staff to consider testimony provided during the workshops on this issue, as this issue was not included in the Staff Analysis. Any model attempting to predict costs in a competitive world must also account for changes in market share.

The RTC also urges the Commission staff to note the issue of "time frame," as discussed in the Christensen Associates attachment to USTA's comments.

¹³ Southwestern Bell comments at i.

¹⁴ See, for example, Ameritech at 8. See also, USTA attachment at 2, Christensen Associates.

¹⁵ MCI and AT&T comments at 10.

¹⁶ Only GTE discusses a problem inherent in this assumption. "Certainly the entrant cannot place capacity to serve 100% of the market, as the proxy models assume, and utilize that plant at a very high level on day one." GTE comments at 18.

[N]o time frame is associated with the models or costs. A simple question in this area is how long the costs are good for -- one year, two years or more?¹⁷

Indeed, there currently exists no time frame associated with the models or resulting costs.

The RTC has previously explained that in order to generate enough information for a full assessment of proxy impacts, there needs to be some detail regarding scheduled updates.¹⁸

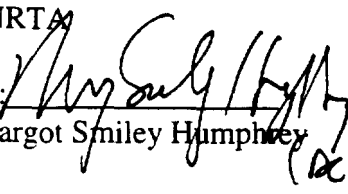
In evaluating any model, the Commission staff must consider whether the proponents have a plan for continued update and/or revision to the model inputs or to the model itself.


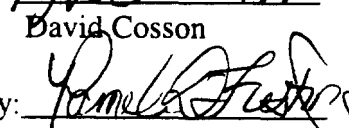
¹⁷ USTA attachment at 4, Christensen Associates.


¹⁸ See RTC letter to John S. Morabito, Deputy Chief, Accounting and Audits Division, January 7, 1997.

In conclusion, the RTC urges the Commission staff to carefully consider the issues discussed above as well as testimony provided during the January 14-15 workshops. The record indicates substantial concern regarding the potential for a market crisis. Clearly, these issues must be resolved before any one model can be appropriately applied for any regulatory purpose. In addition, the RTC stresses the importance of some alternative measure for those instances in which the chosen model underpredicts a carrier's costs. The only measure by which to accommodate the wide variations among small, rural company conditions within a proxy approach would be one that is *voluntary*.

Respectfully submitted,
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February 24, 1997

CERTIFICATE OF SERVICE

I, Gail C. Malloy, certify that a copy of the foregoing Reply Comments of the Rural Telephone Coalition in CPD 97-2 was served on this 24th day of February 1997, by first-class, U.S. Mail, postage prepaid, to the following persons on the attached list:

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Models to Determine) CC Docket No. 96-45
Cost of Providing Service)

Reply Comments of the
Rural Utilities Service

Introduction

The Rural Utilities Service (RUS) appreciates the opportunity to offer comment to the Commission on universal service and the proposed computer cost models.

The RUS is a rural development agency of the U.S. Department of Agriculture that has promoted universal service in rural America for 48 years through targeted lending, technical support and policy guidelines. Rural America is comprised of 80% of the landmass of the country, but only 20% of the population. Rural areas are high cost to serve.

The RUS has attempted to evaluate the performance of the BCPM and the Hatfield 3 cost models in estimating the cost to build plant that is capable of providing core services. These comments solely address the most rural of areas, those with 25 subscribers per route mile or less. This paper summarizes the results of those efforts. Note that plant costs, not expenses, are the focus of this evaluation.

The RUS Cost of Plant

When RUS performs a loan feasibility study, it develops a projected telephone plant in service total, which contains only the plant that will be retained and reused in the proposed system plus all improvements proposed in the loan. This is a calculation of gross plant, before depreciation, which is comparable to the model's projection of total investment. An apples to apples comparison. RUS engineers determine the acceptability of the plant proposed to be retained in the projected system, and determine the original